

AMENDMENTS TO THE CLAIMS:

1. (Previously presented) A portable communication apparatus comprising:
 - an image-capturing section for capturing an image depending on an operation of a shutter key and for sensing images in real-time;
 - a display that includes a viewfinder display that displays said real-time sensed images and that includes a reference frame that indicates a predetermined optimal size of characters to achieve a predetermined success rate for character recognition for a character positioned within the reference frame; and
 - a character recognition section for recognizing a character from a captured image.
2. (Previously presented) The portable communication apparatus according to claim 1, wherein said display further displays the captured image, wherein said display further comprises a character-size adjustment indicator that includes the reference frame such that a user moves said portable communication apparatus to image at least a portion of the characters of said captured image to fit approximately into said reference frame.
3. (Previously presented) The portable communication apparatus according to claim 2, wherein the character-size adjustment indicator appears on the display when the portable communication apparatus is set to a character recognition mode.
4. (Currently amended) The portable communication apparatus according to claim 2, wherein the character-size adjustment indicator is fixed on the display when said portable communication apparatus is set to a character recognition mode.

5. (Previously presented) The portable communication apparatus according to claim 2, wherein the reference frame is a rectangle and is oriented horizontally with respect to the display.

6. (Previously presented) The portable communication apparatus according to claim 1, further comprising:

a timer that delays an image-capturing operation of the image-capturing section by a predetermined time period after an operation of the shutter key has been completed.

7. (Original) The portable communication apparatus according to claim 6, wherein the predetermined time period is set through an input device of the portable communication apparatus.

8. (Previously presented) The portable communication apparatus according to claim 2, further comprising:

a timer that delays an image-capturing operation of the image-capturing section by a predetermined time period after the operation of the shutter key has been completed.

9. (Previously presented) The portable communication apparatus according to claim 1, further comprising:

a program memory storing a plurality of programs including a mailer program and a browser program; and

a processor for executing at least one program,

wherein

the processor starts the mailer program when a string of the recognized characters represents an e-mail address,

the processor starts the browser program when a string of the recognized characters represents a URL (uniform resource locator), and

the processor starts making a call at the phone number when a string of the recognized characters represents a phone number.

10. (Previously presented) The portable communication apparatus according to claim 1, further comprising:

a memory storing a plurality of recognition criterion each corresponding to a different type of character string;

wherein the character recognition section uses one of the plurality of recognition criterion to recognize a character from the captured image.

11. (Previously presented) The portable communication apparatus according to claim 9, further comprising:

a memory storing a plurality of recognition criterion each corresponding to a different type of character string,

wherein the character recognition section uses one of the plurality of recognition criterion to recognize a character from the captured image.

12. (Previously presented) A data input method in a portable communication apparatus having an image-capturing function of capturing an image, the method comprising:

capturing an image depending on an operation of a shutter key; and

recognizing a character from a captured image to enter the character as input data,

wherein said portable communication apparatus comprises a viewfinder display that displays images sensed in real-time and a reference frame that indicates an optimal size for characters to achieve a predetermined success rate for character recognition of a character positioned within the reference frame, and

wherein said recognizing a character recognizes a character positioned within said reference frame when said image is captured.

13. (Previously presented) A method for recognizing characters in a portable communication apparatus having an image-capturing device and a display, the method comprising:

setting a character-size adjustment indicator on the display, wherein the character-size adjustment indicator comprises a reference frame having a size which provides a sufficiently high success rate in character recognition when one or more characters are approximately fitted into said reference frame;

capturing an image depending on an operation of a shutter key when a character displayed on the display fits into the reference frame;

recognizing the character within the reference frame from a captured image; and

displaying a recognized character in a predetermined display area on the display.

14. (Previously presented) The method according to claim 13, wherein the capturing an image comprises:

image-processing the captured image to produce a processed image;
clipping out a portion of the processed image within the reference frame; and
recognizing the character from the clipped portion of the processed image.

15. (Previously presented) The method according to claim 13, wherein the capturing an image comprises:

image-processing a portion of the captured image within the reference frame to produce a processed image; and
recognizing the character from the processed image.

16. (Previously presented) The method according to claim 13, further comprising:

repeating capturing an image, recognizing the character, and displaying a recognized character by sequentially selecting portions of a string of characters displayed on the display, each portion including a character which fits into the reference frame, wherein a plurality of recognized characters are displayed on the display by combining the portions in series, each of which includes a recognized character.

17. (Previously presented) The method according to claim 13, wherein the capturing an image comprises delaying an image-capturing operation by a predetermined time period after the operation of the shutter key has been completed.

18. (Previously presented) The method according to claim 13, wherein the capturing an image comprises:

storing a plurality of recognition criterion each corresponding to a different type of character string;

determining a type of a character string; and

recognizing a character within the reference frame based on a recognition criterion corresponding to the determined type of the character string.

19. (Previously presented) The method according to claim 18, further comprising:

starting a mailer program when the recognized character string comprises an e-mail address type;

starting a browser program when the recognized character string comprises a URL (uniform resource locator) type; and

making a call using a phone number represented by the recognized character string when the recognized character string comprises a phone number type.

20. (Previously presented) A program embodied in a computer readable medium executable by a computer to recognize characters in a portable communication apparatus having an image-capturing device and a display, the program comprising:

instructions for setting a character-size adjustment indicator on the display, wherein the character-size adjustment indicator comprises a reference frame having a size which provides a sufficiently high success rate in character recognition when one or more characters are approximately fitted into said reference frame;

instructions for capturing an image depending on an operation of a shutter key when a character displayed on the display fits into the reference frame;

instructions for recognizing the character within the reference frame from a captured image; and

instructions for displaying a recognized character in a predetermined display area on the display.